

AMENDMENT TO THE ABSTRACT

The following abstract will replace all prior versions of the abstract in the application:

A measuring system including a measuring device (1) with a laser tracker (2) and an opto-electronic sensor (3) having fixed positions relative to one another, ~~a system computer~~ and an auxiliary measuring tool (4) with a reflector (5) and at least three light spots (6), is calibrated ~~with the following calibration steps~~: The auxiliary measuring tool (4) is rigidly coupled with an arrangement of auxiliary reflectors (5') and is moved around at least two different rotation axes. ~~In at least two rotation positions relative to each one of the at least two rotation axes, reflector (5)~~ Reflector and auxiliary reflectors (5') are registered by the laser tracker (2) and the light spots (6) are registered by the opto-electronic sensor (3). From the ~~measured~~ data of the laser tracker (2) positions and orientations of the reflector arrangement relative to the laser tracker (2) and from the ~~measured~~ data of the opto-electronic sensor (3) positions and orientations of the light spot arrangement relative to the opto-electronic sensor (3) are calculated and, ~~from this, the at least two rotation axes relative to the reflector arrangement and relative to the light spot arrangement are calculated. Then~~ ~~calibration~~ Calibration data are calculated by equating corresponding rotation axes. ~~For the measuring steps a calibration device (9) comprising a revolving table (11) and a wedge (12) installed on the table is used, wherein the auxiliary measuring tool (4) is mounted on the wedge (12) in two different orientations.~~